

Dr. Stefano Negro
Lecturer
Mathematics
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Research interests

Classical and Quantum Integrable Systems
Quantum Field Theory
Quantum Systems in Low Space-Time Dimensions
Conformal Field Theory
Spin Chains
Renormalization Group
AdS/CFT Correspondence
Statistical Mechanics

Qualifications

Italian National Academic Qualification as Associate Professor of Physics, Italian Ministry for Higher Education
Award Date: 27 Jan 2022

PhD, ODE/IM Correspondence in Toda Field Theories and Fermionic Basis in $\sin(h)$ -Gordon Model, Università Degli Studi di Torino

1 Jan 2011 → 20 Jun 2014

Award Date: 20 Jun 2014

Masters, Monopole Clusters, Center Vortices and Quark Confinement in Gauge Models, Università Degli Studi di Torino

1 Sept 2008 → 31 Aug 2010

Award Date: 18 Jun 2010

BSc, Duality Relations in Statistical Mechanics, Università Degli Studi di Torino

1 Sept 2005 → 31 Aug 2008

Award Date: 19 Sept 2008

Employment

Lecturer

Lecturer

Mathematics

University of York

Heslington, York

8 Jan 2024 → present

Prizes

Prize Vinci 2012

Negro, S. (Recipient), 19 Jul 2012

Seal of Excellence

Negro, S. (Recipient), 13 Feb 2023

Trapezio, paving the way to research excellence and talent attraction

Negro, S. (Recipient), 17 Jul 2023

Activities: Conference Organisation

Conformal Field Theory, Integrability, and Geometry

Negro, S. (Organiser)
11 Mar 2024 → 15 Mar 2024

Great Lessons From Exact Techniques And Beyond 2023

Negro, S. (Organiser)
28 Aug 2023 → 1 Sept 2023

TTbar and Other Solvable Deformations of Quantum Field Theories

Negro, S. (Organiser)
8 Apr 2019 → 12 Apr 2019

Activities: Invited Speaker at Conferences and Workshops

Integrability in Gauge and String Theory 2025

Negro, S. (Invited speaker)
22 Jul 2025

Integrable and Conformal Field Theories

Negro, S. (Invited speaker)
19 Jun 2025

Exact approaches to low-supersymmetry AdS/CFT

Negro, S. (Invited speaker)
21 Oct 2024 → 25 Oct 2024

Integrable Sigma-Models

Negro, S. (Invited speaker)
27 May 2024 → 31 May 2024

Integrable systems and Field Theories

Negro, S. (Invited speaker)
11 Oct 2023 → 13 Oct 2023

Integrability, Dualities and Deformations

Negro, S. (Invited speaker)
24 Jul 2023 → 28 Jul 2023

Integrability in Condensed Matter Physics and Quantum Field Theory

Negro, S. (Invited speaker)
3 Feb 2023 → 12 Feb 2023

Integrability, Duality and Related Topics

Negro, S. (Invited speaker)
31 Oct 2022 → 5 Nov 2022

Talking Integrability: Spins, Fields and Strings

Negro, S. (Invited speaker)
29 Aug 2022 → 1 Sept 2022

Integrability in Gauge and String Theories 2020

Negro, S. (Invited speaker)
24 Aug 2020 → 28 Aug 2020

New frontiers of integrable deformations

Negro, S. (Invited speaker)
14 Sept 2019 → 24 Sept 2019

Integrability in Gauge and String Theories 2019

Negro, S. (Invited speaker)
15 Jul 2019 → 19 Jul 2019

(Ir)regular singularities and Quantum Field Theory

Negro, S. (Invited speaker)
8 Jul 2019 → 11 Jul 2019

XIV Avogadro Meeting on Strings, Supergravity and Gauge Theories

Negro, S. (Keynote/plenary speaker)
18 Dec 2018 → 21 Dec 2018

Exactly Solvable Models of Quantum Field Theory and Statistical Mechanics

Negro, S. (Invited speaker)
4 Sept 2018 → 30 Nov 2018

Activities: Lectures at Graduate Schools

YRISW graduate school

Negro, S. (Invited speaker)
Feb 2017 → ...

YRIS graduate school

Negro, S. (Invited speaker)
Jul 2015 → ...

Activities: Editorial Work

Symmetry integrability and geometry-Methods and applications (Journal)

Negro, S. (Reviewer)
2024 → ...

Journal of Statistical Mechanics: Theory and Experiment (Journal)

Negro, S. (Reviewer)
2021 → ...

Physica Scripta (Journal)

Negro, S. (Reviewer)
2020 → ...

SciPost Physics Core (Journal)

Negro, S. (Reviewer)
2020 → ...

Journal of High Energy Physics (Journal)

Negro, S. (Reviewer)
2019 → ...

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics (Journal)

Negro, S. (Reviewer)

2018 → ...

Journal of Physics A: Mathematical and Theoretical (Journal)

Negro, S. (Reviewer)

2017 → ...

Nuclear Physics B (Journal)

Negro, S. (Reviewer)

2017 → ...

Communications in Mathematical Physics (Journal)

Negro, S. (Reviewer)

2016 → ...

Activities: Invited Speaker at Seminars

Weekly Seminar (via ZOOM)

Negro, S. (Invited speaker)

19 Feb 2025

Weekly Seminar

Negro, S. (Invited speaker)

18 Feb 2025

Weekly Seminar

Negro, S. (Invited speaker)

9 Dec 2024

Weekly Seminar

Negro, S. (Invited speaker)

19 Oct 2023

Weekly seminar

Negro, S. (Invited speaker)

18 May 2023

Weekly Seminar

Negro, S. (Invited speaker)

4 May 2023

Weekly Seminar

Negro, S. (Invited speaker)

23 Mar 2023

Weekly Seminar

Negro, S. (Invited speaker)

14 Mar 2023

Weekly seminar

Negro, S. (Invited speaker)

2 Mar 2023

Weekly seminars

Negro, S. (Invited speaker)

11 Jan 2023

Weekly Seminar

Negro, S. (Invited speaker)
7 Dec 2022

Weekly seminar

Negro, S. (Invited speaker)
24 Nov 2022

Weekly seminar

Negro, S. (Invited speaker)
15 Nov 2022

Weekly seminar

Negro, S. (Invited speaker)
9 Nov 2022

Weekly seminar

Negro, S. (Invited speaker)
4 Nov 2022

Weekly seminar

Negro, S. (Invited speaker)
27 Oct 2022

Weekly seminar

Negro, S. (Invited speaker)
19 Oct 2022

Weekly seminar

Negro, S. (Invited speaker)
13 Oct 2022

Weekly seminar

Negro, S. (Invited speaker)
4 Oct 2022

Weekly seminar

Negro, S. (Invited speaker)
12 May 2022

Weekly seminar

Negro, S. (Invited speaker)
21 Apr 2022

Weekly seminar

Negro, S. (Invited speaker)
20 Jan 2022

Weekly seminar

Negro, S. (Invited speaker)
18 Nov 2021

Weekly seminar

Negro, S. (Invited speaker)
18 May 2021

Weekly seminar

Negro, S. (Invited speaker)
27 Jan 2021

Weekly seminar

Negro, S. (Invited speaker)
19 Nov 2020

Weekly seminar

Negro, S. (Invited speaker)
9 Apr 2020

Weekly seminar

Negro, S. (Invited speaker)
13 Feb 2020

Weekly seminar

Negro, S. (Invited speaker)
22 Nov 2019

Weekly seminar

Negro, S. (Invited speaker)
30 May 2019

Weekly seminar

Negro, S. (Invited speaker)
14 Mar 2019

Weekly seminar

Negro, S. (Invited speaker)
12 Jun 2018

Weekly seminar

Negro, S. (Invited speaker)
1 Jun 2018

Weekly seminar

Negro, S. (Invited speaker)
25 Jan 2018

Weekly seminar

Negro, S. (Invited speaker)
9 Nov 2017

Weekly seminar

Negro, S. (Invited speaker)
18 May 2017

Weekly seminar

Negro, S. (Invited speaker)
3 May 2017

Weekly seminar

Negro, S. (Invited speaker)
14 Mar 2017

Weekly seminar

Negro, S. (Invited speaker)
Oct 2016

Weekly seminar

Negro, S. (Invited speaker)
Jun 2016

Weekly seminar

Negro, S. (Invited speaker)
Apr 2016

Weekly seminar

Negro, S. (Invited speaker)
Nov 2015

Weekly seminar

Negro, S. (Invited speaker)
May 2015

Weekly seminar

Negro, S. (Invited speaker)
Jan 2015

Weekly seminar

Negro, S. (Invited speaker)
Nov 2014

Weekly seminar

Negro, S. (Invited speaker)
Jun 2014

Weekly seminar

Negro, S. (Invited speaker)
Apr 2014

Weekly seminar

Negro, S. (Invited speaker)
Feb 2014

Weekly seminar

Negro, S. (Invited speaker)
Feb 2013

Research outputs

TT^- Deformations and Form Factor Program

Castro-Alvaredo, O. A., Negro, S. & Sailis, F., 5 Dec 2025, In: Journal of Physics: Conference Series. 3152, 1, 10 p., 012042.

Complete minimal form factors for irrelevant deformations of integrable quantum field theory

Castro-Alvaredo, O. A., Sailis, F. & Negro, S., 2 Oct 2025, In: Nuclear Physics B. 1019, 22 p., 117131.

Boundary quantum field theories perturbed by $TTbar$: Towards a form factor program

Castro-Alvaredo, O. A., Negro, S. & Sailis, F., Aug 2025, In: Nuclear Physics B. 1017, 116924.

Minimal Model Renormalization Group Flows: Noninvertible Symmetries and Nonperturbative Description

Ambrosino, F. & Negro, S., 8 Jul 2025, In: Physical Review Letters. 135, 2, 7 p., 21602.

Gravity and TT^- flows in higher dimensions

Morone, T., Negro, S. & Tateo, R., Aug 2024, In: Nuclear Physics B. 1005, 116605.

Completing the bootstrap program for (Formula presented)-deformed massive integrable quantum field theories

Castro-Alvaredo, O. A., Negro, S. & Sailis, F., 14 Jun 2024, In: Journal of Physics A: Mathematical and Theoretical. 57, 26, 265401.

On the representation of minimal form factors in integrable quantum field theory

Castro-Alvaredo, O. A., Negro, S. & Szécsényi, I. M., Mar 2024, In: Nuclear Physics B. 1000, 116459.

Entanglement entropy from form factors in TT^- -deformed integrable quantum field theories

Castro-Alvaredo, O. A., Negro, S. & Sailis, F., 21 Nov 2023, In: Journal of High Energy Physics. 2023, 11, 129.

Deterministic chaos vs integrable models

Negro, S., Popov, F. K. & Sonnenschein, J., 15 Nov 2023, In: Physical review d. 108, 10, 105024.

The generalized Born oscillator and the Berry-Keating Hamiltonian

Giordano, F., Negro, S. & Tateo, R., 17 Oct 2023, In: Journal of High Energy Physics. 2023, 10, 99.

Form factors and correlation functions of TT^- -deformed integrable quantum field theories

Castro-Alvaredo, O. A., Negro, S. & Sailis, F., 8 Sept 2023, In: Journal of High Energy Physics. 2023, 9, 48.

Topological gauging and double current deformations

Dubovsky, S., Negro, S. & Porrati, M., Jun 2023, In: Journal of High Energy Physics. 2023, 5, 240.

Deforming the ODE/IM correspondence with TT^-

Aramini, F., Brizio, N., Negro, S. & Tateo, R., 14 Mar 2023, In: Journal of High Energy Physics. 2023, 3, 84.

Thermodynamic Bethe Ansatz past turning points: the (elliptic) sinh-Gordon model

Córdova, L., Negro, S. & Schaposnik Massolo, F. I., 10 Jan 2022, In: Journal of High Energy Physics. 2022, 1, 35.

On factorizable S-matrices, generalized $TTbar$, and the Hagedorn transition

Camilo, G., Fleury, T., Lencsés, M., Negro, S. & Zamolodchikov, A., 7 Oct 2021, In: Journal of High Energy Physics. 2021, 10, 35 p., 62.

Geometric aspects of the ODE/IM correspondence

Dorey, P., Dunning, C., Negro, S. & Tateo, R., 5 Jun 2020, In: Journal of Physics A: Mathematical and Theoretical. 53, 22, 223001.

Flow Equations for Generalized $T\bar{T}$ Deformations

Hernández-Chifflet, G., Negro, S. & Sfondrini, A., 22 May 2020, In: Physical Review Letters. 124, 20, 200601.

Conserved currents and $T\bar{T}$ irrelevant deformations of 2D integrable field theories

Conti, R., Negro, S. & Tateo, R., 1 Nov 2019, In: Journal of High Energy Physics. 2019, 11, 120.

The $T\bar{T}$ perturbation and its geometric interpretation

Conti, R., Negro, S. & Tateo, R., 1 Feb 2019, In: Journal of High Energy Physics. 2019, 2, 85.

Generalised Born-Infeld models, Lax operators and the $T\bar{T}$ perturbation

Conti, R., Iannella, L., Negro, S. & Tateo, R., 1 Nov 2018, In: Journal of High Energy Physics. 2018, 11, 7.

Integrability of conformal fishnet theory

Gromov, N., Kazakov, V., Korchemsky, G., Negro, S. & Sizov, G., 1 Jan 2018, In: Journal of High Energy Physics. 2018, 1, 95.

$T\bar{T}$ -deformed 2D quantum field theories

Cavaglià, A., Negro, S., Szécsényi, I. M. & Tateo, R., 1 Oct 2016, In: Journal of High Energy Physics. 2016, 10, 112.

Integrable structures in quantum field theory

Negro, S., 20 Jul 2016, In: Journal of Physics A: Mathematical and Theoretical. 49, 32, 323006.

An integrability primer for the gauge-gravity correspondence: An introduction

Bombardelli, D., Cagnazzo, A., Frassek, R., Levkovich-Maslyuk, F., Loebbert, F., Negro, S., Szécsényi, I. M., Sfondrini, A., Tongeren, S. J. V. & Torrielli, A., 2016, In: Journal of Physics A: Mathematical and Theoretical. 49, 32, 320301.

On sinh-Gordon thermodynamic Bethe ansatz and fermionic basis

Negro, S., 10 Aug 2014, In: International Journal of Modern Physics A. 29, 20, 1450111.

Reflection Relations and Fermionic Basis

Negro, S. & Smirnov, F., Dec 2013, In: Letters in Mathematical Physics. 103, 12, p. 1293-1311 19 p.

On one-point functions for sinh-Gordon model at finite temperature

Negro, S. & Smirnov, F., 1 Oct 2013, In: Nuclear Physics B. 875, 1, p. 166-185 20 p.

The bethe ansatz and the tztzéica-bullough-dodd equation

Dorey, P., Faldella, S., Negro, S. & Tateo, R., 28 Apr 2013, In: Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences. 371, 1989, 20120052.